PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Ward

Examiner: Kim

Serial No.: 10/768,263

Group Art Unit: 3752

Filed January 30, 2004

For: Mechanically Sealed Adjustable Gas Nozzle

SECOND APPEAL BRIEF

Commissioner of Patents and Trademarks
P. O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

Further to the Notice of Appeal filed March 23, 2009, the First Appeal Brief filed May 20, 2009 and subject to the Notification of Non-Compliant Appeal Brief dated June 24, 2009, enclosed is the Second Appeal Brief, all fees being previously paid. However, if additional fees are incurred as deemed to be applicable, please charge any additional fee or credit any overpayment to Deposit Account No. 13-3403. Three copies of this page are attached for this purpose.

I. PRESENTATION OF THE APPEAL

A. Real Party in Interest

The real party in interest is Appellants' assignee, Burner Systems International, Inc., a Delaware Corporation with its principal place of business at 3600 Cummings Road; Chattanooga, TN 37419.

B. Related Appeals and Interferences

There are no related appeals and interferences.

C. Status of Claims on Appeal

Claims 1-3, 5-9, 11-14 and 16-20 are the subject of this appeal. Claims 4, 10 and 15 were cancelled during prosecution. The grounds of rejection subject to appeal are described below in paragraph (I)(F).

At the time of the final Office Action, claims 1-3, 5-9, 11-14 and 16-20 were pending in the application. The application was initially filed with 16 claims, claims 1-16. Claims 1 and 7 were amended on February 22, 2005 following an Office Action dated November 12, 2004 (A Petition and payment for a one month extension were concurrently provided). Claim 1 was amended again on August 18, 2005 following the Office Action dated May 18, 2005. Claims 1 and 6 were amended on January 31, 2006. Claim 1 was amended on June 29, 2006 with the filing of a Request for Continued Examination following the Final Office Action dated April 20, 2006. Claims 1, 5, 7 11 and 16 were amended with an Amendment and Response filed November 27, 2006 following the Office Action dated July 26, 2006 (A Petition and payment for one month extension were concurrently provided). New claims 17-20 were also presented at that time.

Claims 1, 5, 11 and 17 were amended on May 2, 2007, with a Request for Continued Examination following the Office Action dated January 25, 2007. (A Notice of Appeal was filed on April 24, 2007, then instead of following up with an Appeal Brief, the Request for Continued Examination was filed May 2, 2007). Claim 1 was amended with a response filed on June 28, 2007, following an Office Action dated June 12, 2007. Claim 1 was once again amended on October 8, 2007 with the filing of a Request for

Continued Examination and claims 4, 10 and 15 were cancelled with that amendment in response to the Office Action dated September 13, 2007.

A Notice of Appeal was filed January 28, 2008, responsive to the Final Office Action of October 25, 2007. A brief was filed February 21, 2008, and refiled March 21, 2008 subject to a Non-Compliant Appeal Brief notification dated March 13, 2006. Prosecution was reopened on June 11, 2008. A response was filed on September 11, 2008 amending claims 1 and 17. A final Office Action issued on December 31, 2008. The applicant filed a Second Notice of Appeal on March 23, 2009 appealing all pending claims. This is the Appeal Brief following the Second Notice of Appeal.

A copy of the rejected claims subject to this appeal appears in Appendix A.

D. Status of Amendments

No proposed amendments have been proposed or entered after final.

E. Summary of Invention reflecting at least the Independent Claims

Most generally, the present invention provided by Claim 1 relates to an adjustable gas nozzle **10** having a conduit for receiving gas from a source, a nozzle body member **14** for supplying a jet of gas to the burner section of an appliance, and a flow adjusting member **16**. (Page 4, lines 5-8). The nozzle body member **14** has an elongated gas passageway with a threaded inlet opening at a first end **22** (Page 4, lines 9-10) and a coaxial outlet **28** at a second end. (Page 4, line 12). The conduit **12** is theadedly connected to the nozzle body member **14**. (Page 6, lines 18-19).

The flow adjusting member **16** has a first passageway extending therethrough (Page 4, lines 16-17) and is disposed intermediate the conduit **12** and the nozzle body **14** (Figure 1, Page 4, lines 10-12 and 17-18). A first end **32** has a first restricted orifice or

outlet **36** disposed proximate to the first end of the nozzle body member **14** (Figure 1, Page 4, lines 21-22). Second orifice or outlet is at a second end (Figure 1). First or longitudinal passageway or first passageway provides fluid communication through the flow adjusting member **16** through the first and second orifices (Figure 1, Page 4, lines 16-17).

Coupling in the form of threads intermediate the body member **14** and conduit **12** allow for first and second positions (Page 5, lines 11-18, Claim 1 as originally filed).

By-pass passageway **46** provides a flow path around the first orifice and the first passageway in the second position. (Figure 1 and Page 5, lines 17-18). When in said first position, cooperating surfaces (exterior conical surface **32** and internal conical surface **30**) seal between the body member and the adjusting member to close off flow through the by-pass passageway **46**. (Page 5, lines 11-14, Figure 1). The first restricted orifice **32** regulates flow rate when in the first position with gas flowing through the first restricted orifice **32** and the second orifice in series through the longitudinal passageway. (Page 5, line 21- Page 6, line 1).

Cooperating means are associated with the adjusting member and the conduit **12** upstream of the cooperating surfaces for limiting displacement of the nozzle body member relative to the conduit in the first position (Claim 1 as originally filed, Figure 1 illustrated at the contact of the nozzle body member **14** with the conduit **14** at end **25**). The nozzle body member is moveable into a second position relative to the conduit which relieves the seal between the body member and the adjusting member permitting a second flow of gas through the combination of the first restricted orifice and the by-pass passageway wherein flow through the by-pass passageway does not flow through the first

passageway (Page 5, lines 15-21) (the cooperating surfaces are shown spaced apart for such a configuration on the right hand side in Figure 1).

A seal distinct of the coupling provided between the conduit and nozzle body member integral to the conduit is also provided to preclude leakage of gas therebetween in both the first and second position which is illustrated as ribs or ridges **50,52** in the preferred embodiment (Page 6, lines 4-22).

Finally, the first position is described as being usable with propane and the second position with considerably more flow for use with natural gas. (Page 7, lines 6-10).

Claim 17 is similar to claim 1 except that it lacks some elements claimed in claim 1, but provides for a non-adjustable restricted first restricted orifice which is indicated by lead line **36** in Figure 2.

Claim 17 provides an adjustable gas nozzle **10** having a conduit for receiving gas from a source, a nozzle body member **14** for supplying a jet of gas to the burner section of an appliance, and a flow adjusting member **16**. (Page 4, lines 5-8). The nozzle body member **14** has an elongated gas passageway with a threaded inlet opening at a first end **22** (Page 4, lines 9-10) and a coaxial outlet **28** is second end (Page 4, line 12). The conduit **12** is threadedly connected to the nozzle body **14** (Page 6, lines 18-19). The flow adjusting member **16** has a first passageway extending therethrough (Page 4, lines 16-17) and is disposed intermediate the conduit **12** and the nozzle body **14** (Figure 1, Page 4, lines 10-12 and 17-18). A first end **32** has a first non-adjustable restricted orifice at outlet **36** which is disposed at the terminal end of the nozzle body member **14** (Figure 1, Page 4, lines 21-22). This is proximate to the second end of the nozzle body member (See Figure 1). First or longitudinal passageway or first passageway provides fluid communication

through the flow adjusting member **16** through the first and second orifices (Figure 1, Page 4, lines 16-17).

Coupling in the form of threads intermediate the body member **14** and conduit **12** allow for first and second positions (Page 5, lines 11-18, Claim 1 as originally filed).

By-pass passageway **46** provides a flow path around the first orifice and the first passageway in the second position. (Figure 1 and Page 5, lines 17-18). When in said first position, cooperating surfaces (exterior conical surface **32** and internal conical surface **30**) seal between the body member and the adjusting member to close off flow through the by-pass passageway **46**. (Page 5, lines 11-14, Figure 1). The first restricted orifice **32** regulates flow rate when in the first position with gas flowing through the first restricted orifice **32** and the second orifice in series through the longitudinal passageway. (Page 5, line 21- Page 6, line 1).

Cooperating means are associated with the adjusting member and the conduit **12** upstream of the cooperating surfaces for limiting displacement of the nozzle body member relative to the conduit in the first position (Claim 1 as originally filed, Figure 1 illustrated at the contact of the nozzle body member **14** with the conduit **14** at end **25**). The nozzle body member is moveable into a second position relative to the conduit which relieves the seal between the body member and the adjusting member permitting a second flow of gas through the combination of the first restricted orifice and the by-pass passageway wherein flow through the by-pass passageway does not flow through the first passageway (Page 5, lines 15-21) (the cooperating surfaces are shown spaced apart for such a configuration on the right hand side in Figure 1).

A seal distinct of the coupling provided between the conduit and nozzle body member integral to the conduit is also provided to preclude leakage of gas therebetween in both the first and second position which is illustrated as ribs or ridges **50,52** in the preferred embodiment (Page 6, lines 4-22).

Finally, the first position is described as being usable with propane and the second position with considerably more flow for use with natural gas. (Page 7, lines 6-10).

F. Grounds of Rejection to be Reviewed on Appeal

1. Whether the Office Action properly rejected claims 1, 3, 5-7, 9, 11, 12, and 17 as being anticipated under 35 U.S.C. §102 by Hinchman, U.S. Patent No. 2,517,877 (hereinafter "Hinchman").

2. Whether the Office Action properly rejected claims 1, 3, 5-7, 9, 11, 12 and 17 as being obvious 35 U.S.C. §103 over Ridenour, U.S. Patent No. 5,025,990 (hereinafter "Ridenour") in view of Ito, U.S. Patent No. 4,432,496 (hereinafter "Ito") in the Final Office Action.

3. Whether the Office Action properly rejected claims 1-3, 5-9, 11-14, and 16-20 as being obvious 35 U.S.C. §103 over Ridenour, U.S. Patent No. 5,025,990 (hereinafter "Ridenour") in view of Kuiken, U.S. Patent No. 3,116,880.

4. While the Office Action properly rejected claims 1-3, 5-9, 11-14 and 16-20 as being obvious 35 U.S.C. §103 over Ridenour in view of Kachergis, U.S. Patent No. 2, 944,743.

II. ARGUMENT

A. Anticipation Rejection of Claims 1, 3, 5-7, 9, 11, 12, 16 and 17

1. Rejection of Claims 1-3, 5- 7, 9, 11, 12, and 16

Hinchman was argued by the Final Office action to provide an adjustable gas nozzle having a nozzle body member **8**, a conduit **7** and a adjusting member **25** and **26**. The applicant would agree with this characterization of Hinchman, but this is about where agreement appears to end as it relates to the structure identified by the Office Action which could correlate to claim limitations.

a. Hinchman lacks a first restricted orifice at a first end of the adjusting member.

The Final Office Action states that Hinchman has a first restricted orifice (orifice of **29** upstream of **27**) at first end **25**. Element **25** in Hinchman is not a first end, but represents sleeve **25**. Element **29** is defined as sleeve bore **29**. An intermediate portion of a bore **29** as referenced by the Final Office Action is not an orifice at an end, particularly at an end proximate to second end of nozzle body member as claimed. Claim 1 is believed to be allowable on the basis of lacking a claimed element over the Hinchman reference.

b. The second end of the adjusting member in Hinchman as identified in the Office Action cannot meet the claim limitations.

The Office Action refers to element **26** as a second end and element **33** as a second orifice. Element **26** in Hinchman is an "adjusting member **26**" and is not at a second end which would be at the top of the nozzle body member **8** if the limitation were consistently applied to the Hinchman reference. Element **33** is a "bore **33**" of the adjusting member **26**, and is not an orifice.

c. The Applicant and Examiner disagree that the bore 18 in Hinchman could be a bypass passageway as characterized by the Office Action.

The Applicant would agree that the Examiner correctly identifies that bores **29,33** can provide a passageway, and threaded socket **16** assists in providing a coupling, and **19** and *sic.* **28** (not **27** which is identified in Hinchman as a slit) are cooperating surfaces. However, bore **18** cannot be a by-pass passageway as it cannot meet the limitations of the claim.

Specifically, there is no position of the device shown or described in the Hinchman structure in which gas may logically pass through bore **18** without going through the first passageway which the Office Action equates to elements **29** and **33**.

By identifying seat **15** as a seal, the Office Action effectively acknowledges that gas cannot flow in the identified structure equated as a bypass. In responding to the Applicant pointing this out in November 2006, the Office Action responded that "Hinchman does not disclose by-pass passage **18** as being sealed". The Applicant would respond by observing that Hinchman does not disclose that the bore **18** provides fluid communication and it is believed that it cannot provide fluid communication. The Applicant and the Examiner apparently have polar opposite opinions as to the operation of the Hinchman reference and the Board's assistance should prove invaluable.

The Applicant would propose that there are only a few ways in which gas of any kind can get into bore **18**. First it could leak into bore **18** past shoulder **14**, threaded socket **16** and seat **15**. However, this connection is described by Hinchman as a "gas tight joint" (Col. 2, lines 15-16). Accordingly, Hinchman expressly teaches away from such an interpretation.

Second, gas could pass through passageway **29, 33** and go back upstream past head **31**. However, Claim 1 explicitly prohibits such an interpretation since gas through

the by-pass passageway cannot proceed through the first passageway (which was equated to passageway **29,33** by the Office Action). Accordingly, this interpretation is not a possibility.

Finally, the Office Action appears to argue that gas could leak past threaded connection **12,30** proceeding from bore **11** past connection of threads **12,30** past lock nut **32** and into bore **18**.

In order to achieve such a construction (which is not suggested or described in the Hinchman reference), one would need to ignore the Hinchman specification which explicitly requires at the bottom of Col. 2, line 53-Col. 3, line 1 for the lock nut **32** to be "screwed down **tight** against the seat **15**"(emphasis added). This appears to be a similar mechanical connection that created the "gas tight joint" of the head section **8** to the body section **7**. This connection created by the tightening of the lock nut **32** against the seat **15** would force the threads **30** securely against threads **12** or the internal threads of the nut **32** with the face of the nut against the seat **15** being "tight" against the seat **15**.

There are eleven revolutions of threads **30** against threads **12** and four revolutions of threads **30** against the internal thread of the nut **32** shown in Figure 1. With a lock nut **32** installed to be "tight", it is difficult to envision a scenario where this would not be a gas tight joint. If gas leakage were to be anticipated from such a connection, the Applicant would expect that Hinchman would have described such a gas flow. In spite of this being pointed out to the Patent Office on many occasions, these arguments have been ignored.

Furthermore, the proposed "leak by" interpretation would appear to render the purpose of the regulator **24** of Hinchman unsuitable for its intended purpose. With such a

construction, regardless of the position of the sleeve **25** against the seat **19**, the same pressure and flow would appear to be provided to the hole **23** as would, based on the Office Action's interpretation of Hinchman, be compensated through a "bypass nature" of bore **18** under the proposed interpretation. Regulation of gas flow in the Hinchman device utilizing the Office Action's interpretation is now not possible as ant flow not provided through the primary flow path (sleeve bore **29**) would apparently be compensated under the Office Action's interpretation through the bore **18** under all operating conditions. Accordingly, the Applicant respectfully maintains that bore **18** cannot meet the limitations of the claimed by-pass.

d. The Applicant respectfully disagrees with the Office Action's argument based on the same reference relied upon by the Office Action.

The Applicant believes that the Office Action's proposed construction renders the Hinchman unusable for its intended purpose and requires an interpretation which would change the principle of operation of the Hinchman regulated flow nozzle. Specifically:

> "adjusting member **26** will engage the inner end of the sleeve and force the latter outwardly so that the conical end **28** will slide along the cone shaped seat **19** a predetermined distance which will regulate the size of the sleeve bore at the other end, and thus the regulated flow." (Col. 3, lines 3-8).

Regulating with bore **18** is not contemplated, is expressly taught away from, and would change the principle of operation of Hinchman.

Allowance of claim 1 is respectfully requested since the cited reference is believed not only to not anticipate, but also appears to teach away from the claimed construction.

e. The cooperating surfaces are required to be spaced apart in the second position.

This claim limitation is not addressed in the Office Action. In fact, the cooperating surfaces **19** in the inside of the nozzle body member **8** contact the second end of nozzle body member **8** in all regulating positions of the Hinchman device. Remember:

> "adjusting member **26** will engage the inner end of the sleeve and force the latter outwardly so that the conical end **28** will slide along the cone shaped seat **19** a predetermined distance which will regulate the size of the sleeve bore at the other end, and thus the regulated flow." (Hinchman, Col. 3, lines 3-8).

f. Additional unmet claim limitations exist in the claim.

Additionally, limitations were added so that the first position was further defined to be required to provide sufficient gas flow of propane in a first position while supplying sufficient gas flow of natural gas in a second position with significantly more flow being required with natural gas configures with propane for similar performance. The Office Action completely classifies this limitation as an "intended use" instead of a functional limitation. In fact, significantly more gas flow is required in one position than another is a functional limitation. The Applicant had to argue around the same rejection previously arise when the term "bypass passageway" was employed to distinguish the primary flow passage with earlier prosecution. While there is an intended use feature to this limitation, just like a bypass passageway "bypasses" the primary flow passageway (i.e., an intended use), the limitation is also functional in nature and therefore should be required to be addressed as such.

g. Allowance of claims 1, 3, 5-7, 9, 11, and 12 is respectfully requested.

Allowance of claim 1 is respectfully requested for any, or all, of the above rationale.

2. Rejection of Claims 3 and 5

Claim 3 requires the additional limitation of material of one of the conduit and body member to be harder than the other. No corresponding element from Hinchman was provided in the Office Actions. MPEP 2131.01 requires that in order to anticipate a claim, the reference must teach every element of the claim citing Verdegall Bros v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

In support of rejecting claim 3, the Office Action states: "While Hinchman does not disclose the material of conduit **7** or nozzle body member **8**, Figure 1 of Hinchman shows different cross hatching for conduit **7** and nozzle body member **8** indicating different materials." The Applicant respectfully disagrees with the logic behind this rejection. The different cross hatching is believed to represent different components and not different materials. There is not believed to be support for the Office Action's determination that different materials are represented by the cross hatching. It is only the Applicant's disclosure for which such a theory could be supported which is an improper basis for obviousness rejection much less an anticipation rejection.

Claim 3 depends from claim 1 and is believed to be allowable on the rationale as provided above and is also believed to be separately allowable on this separate basis. Allowance of claim 3 is respectfully requested.

Claim 5 depends from claim 3 and can stand or fall with claim 3 for the purposes of this appeal.

3. Rejection of Claim 6

Claim 6 requires first restricted orifice be smaller than the outlet of the nozzle body member. The Office Action states: "The first restricted orifice (orifice of **29** upstream of **27**) is smaller and in collinear with the outlet (downstream end of nozzle

body member **8**). The Applicant is confident that the Board will agree with the Applicant's analysis of Hinchman as it relates to the outlet **23** being clearly defined as a tapered hole **23** in the tip **21** and not an intermediate structure of the nozzle body member **28** as interpreted by the Office Action. The Applicant believes this interpretation selectively characterizes portions of the Hinchaman reference in a way which should not correspond to the claimed structure if logically interpreted. The outlet **23** is much smaller than the identified bore **29** in the sleeve **25**. Tapered hole **23** in the tip **21** is not the outlet as claimed, and the creative interpretation proffered by the Office Action should not be found persuasive.

Claim 6 depends from claim 1 and is believed to be allowable on the rationale as provided above and is also believed to be separately allowable on this separate basis. Allowance of claim 6 is respectfully requested.

4. Rejection of Claim 7

Claim 7 requires the additional limitation of legs extending longitudinally from the adjusting member spaced from the first orifice which assists in defining the by-pass passageway for the second position.

In rejecting claim 7, the Office Action states that cooperating means **12** and **13** includes an angular shoulder (seat **15** for the lock nut **32** by the anterior wall **15**). Hinchman is described as further disclosing a plurality of legs (the six points of hex nut **32**). The Applicant respectfully disagrees that the six points of the hex nut **32** are legs as claimed.

The Office Action ignores much of the limitation which states: "The space between adjacent legs providing the bypass passageway for gas flow therebetween when

said cooperating surfaces are not engaged." The leakage surface identified as the "bypass" has been described in the Office Action between the hex nut **32** and the surface **15** and not between "legs" as characterized as points of the hex nut. The Applicant believes that the Board will find that the Applicant's interpretation of Hinchman is more accurate than interpretation proposed by the Office Action.

Claim 7 depends from claim 1 and is believed to be allowable on the rationale as provided above and is also believed to be separately allowable on this separate basis. Allowance of claim 7 is respectfully requested.

5. Rejection of Claims 9 and 11

Claim 9 requires the additional limitation of material of one of the conduit and body member to be harder than the other. This same additional limitation is discussed above with reference to claims 3 and 5. Hinchman does not appear to describe or suggest providing any difference in material construction of component parts.

Claim 9 depends from claim 8 and is believed to be allowable on the rationale as provided above and is also believed to be separately allowable on the basis articulated above in reference to claims 3 and 5. Allowance of claim 9 is respectfully requested.

Claim 11 depends from claim 9 and for purposes of this appeal, can stand or fall with claim 9.

6. Rejection of Claim 12

Claim 12 requires the additional limitation of legs extending longitudinally from the adjusting member spaced from the first orifice which assist in defining the by-pass passageway for the second position. This limitation is discussed above with reference to claim 7.

Claim 12 depends from claim 6 and is believed to be allowable on the rationale as provided above and is also believed to be separately allowable on the separate basis articulated above in relation to claim 7. Allowance of claim 12 is respectfully requested.

7. Rejection of Claims 17

a. The Applicant disputes the interpretation of the Hinchman reference provided by the Office Action.

The Office Action characterizes the downstream end opening/orifice of passage **33** as a first non-adjustable restricted orifice proximate to the second end **20** of the nozzle member body **8**. Figure 1 of Hinchman shows that this is not an accurate interpretation of the Hinchman reference. Instead, the interpretation is believed to be creative mischaracterization of elements in Hinchman based on the Applicant's disclosure. Claim 17 requires the restricted orifice to be at the terminal end of the passage. The entire structure of sleeve **25** is between the terminal end of the identified structure and the second end of the nozzle body member **8** which precludes Hinchman from meeting the claim limitations.

b. Unresolved and unaddressed problems exist even if the interpretation proposed by the Office Action could be accepted.

If the interpretation proposed by the Office Action is accepted, then many of the other limitations in claim 17 cannot be accomplished. First, the cooperating surfaces in the first position to seal the body member and the adjusting member to close off flow through the bypass to permit a first gas through the first restricted orifice so that the gas regulator by the first restricted orifice makes absolutely no sense based on the interpretation of Hinchman with the bypass around the nut **32** against the seat **15**.

Second, the limitation of moving the nozzle body member into a second position relative to the conduit to relieve the seal between the body member and the adjusting member to permit a second gas flow to a greater amount than the first gas flow also makes no sense utilizing the proposed interpretation of the Hinchman reference. These two limitations cannot be reconciled with the remainder of the claim based on the structure correlated by the Office Action to the claim limitations.

Accordingly, allowance of claim 17 is respectfully requested at this time.

c. Additional claim limitations are not addressed by the Office Action.

The Applicant also added limitations to the claim to require that more gas flow occur in the second position than the first position based on the intended use with propane and natural gas. In order to avoid the limitation, the Office Action characterized the entire limitation as "an intended use." Such an analysis fails to recognize the functional limitation of the new claim limitations. The functional limitation of "significantly more natural gas be required than propane" is functional in nature and when taken in the totality of the limitation of: "wherein the first position is configured to provide sufficient gas flow for use with propane and the second position is configured to provide sufficient gas flow for natural gas usage for a selected downstream application in which significantly more natural gas would be required than propane for similar performance." The Applicant respectfully disagrees with the Office Action that this is entirely an "intended use" limitation and believes that it is has functional characteristics as well. Nevertheless, based on the change in principal operation of the principal reference, the rejection is believed to be improper.

d. Allowance of claim 17 is respectfully requested.

Allowance of claim 17 on these bases as well as many of the grounds articulated for claim 1, to the extent they apply, is respectfully requested.

B. Obviousness Rejection of Claims 1, 3, 5-7, 9, 11, 12, and 17 based on Ridenour in view of Ito

1. Rejection of Claims 1, 3, 6, 7, 9, 11 and 12

Ridenour shows an adjustable gas nozzle which includes many features of the claimed invention. However, as acknowledged by the Office Action of October 25, 2007: "Ridenour differs from what is being claimed in the seal being distinct from the coupling." In fact, the claimed seal is not provided in Ridenour.

The Office Action states that it would have been obvious to have provided the seal of Ito to the device of Ridenour: "to prevent accidental removal of the nozzle body member." Ito is a foam dispensing device that has no "bypass passageway". Instead Ito discloses unscrewing outer cover **40** from the inner cover **20** to dispense foam from the jet nozzle **42**. Foam is generated by providing liquid from pipe **46** through mixing chamber **32** and out outlet **33** after mixing with air provided from air passage **26** through porous member **31** into the mixing chamber. Foam liquid passes through discharge port **25** and then out jet nozzle **42**.

Ito does provide an outer annular bulge **28** at an upper end of the inner cover out cylindrical portion **27**. Outer annular bulge **28** cooperates with the inner annular engaging bulge **45** so that the **requirement** "that outer cover **40** is prevented from inadvertently from the inner cover **20** in use and yet easily removed from the inner cover **20** by sliding the outer cover relative to the inner cover when desired" can be met (Col. 4, line 66- Col. 5, line 2). The Office Action simply equates the bulge **28** as a seal (which

is not taught or suggested by Ito) and ignores the bulge's function of cooperating with corresponding bulge **45**.

When this was expressly identified by way of response, a subsequent Office Action responded stating that "the fact that the applicant has recognized another advantage which would flow naturally from the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious." (citation omitted). It is not believed that the applicant that has recognized another advantage, but instead, it appears that the Office Action has effectively disassembled half of an operational assembly of two required elements to perform the intended function of that reference of inadvertent removal and then argue that a portion of that assembly equates with the claimed structure without any teaching or suggestion in the reference that the identified structure could perform the limitation of the claim at issue.

Quite simply, this is believed to be an improper obviousness rejection as there is no teaching or suggestion that bulge **28** forms a seal with an internal surface of the outer cover **40** in the two flow positions as claimed.

Instead of Ex parte Obiaya, the Applicant would propose that In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959) is directly on point. A discussion of this case can be found in MPEP 2143.01 under the section entitled: "THE PROPOSED MODIFICATION CANNOT CHANGE THE PRINCIPLE OF OPERATION." Changing the principle of operation is believed to be EXACTLY what the proposed combination proffered by the Final Office action does to Ito. In short, the combination of Ito with Ridenour is not believed to teach or suggest the limitations of claim 1.

Allowance of claim 1 over this proposed combination is respectfully requested.

Claims 3, 5-7, 9, 11 and 12 depend from claim 1 and for the purposes of this appeal, can stand or fall with claim 1.

2. Rejection of Claim 17.

a. Claim 17 is allowable for a similar rationale as discussed above for claim 1.

Claim 17 is an independent claim. Claim 17 requires a seal distinct from the coupling which the Office Action observes is not present in Ridenour: "Ridenour differs from what is being claimed in the seal being distinct from the coupling." Bulge **28** is cited as the element corresponding to the claimed seal in Ito. Removing the bulge **28** removes half of an operational assembly which materially changes the principal of operation which is prohibited by MPEP 2143.01 citing the In re Ratti case (citations previously provided). Furthermore, there is no teaching in the Ito reference that bulge provides the claimed sealing capability.

The rationale for why this claim is not rendered obvious is the same as was argued above as it relates to claim 1.

b. There is no teaching or suggestion to combine references apart from Applicant's disclosure.

Claim 17 requires combustible gases to pass through the primary passageway. Apart from the applicant's specification and claims, there is no motivation to combine a bulge **28** used with inner annular engaging bulge **45** to prevent inadvertent cover **20** removal from a liquid foam dispensing device separately and apart from bulge **45** to perform a function not taught or suggested by the Ito reference for the purpose for which is cited by the Office Action

The applicant would also respectfully submit that the concerns related to sealing water leaks in a foam mixing device and those related to sealing combustible gas often can take on different magnitudes of concern. Leaking water can create wetness. Leaking combustible gas in the presence of a flame can often be expected to create significant problems.

Allowance of claim 17 is respectfully requested.

C. Obviousness Rejection of Claims 1, 3, 5-9, 11-14 and 16-20 based on Ridenour in view of Kuiken

1. Rejection of Claims 1, 3, 5-9, 11-14 and 16.

Ridenour shows an adjustable gas nozzle which includes many features of the claimed invention. However, as acknowledged by the Office Action of October 25, 2007: "Ridenour differs from what is being claimed in the seal being distinct from the coupling."

The Office Action states that it would have been obvious to have provided the seal ribs **84** of Kuiken which is believed to be described erroneously as "integral to conduit **48** because the seal ribs **84** of Kuiken are component parts of the conduit **48**. The Office Action completely ignores the specification of Kuiken where it states that the floor portion of the wall **48** is its outer surfaces provided with *two O-ring seals* **84** secured within grooves **86**." (Emphasis added) O-ring seals **84,** as one familiar with mechanical arts would understand, are not integral to the conduit as claimed. This rejection should be removed for failing to provide the integral nature of the seal with a conduit as provided by the claim limitations.

The claim limitations cannot include O-ring seals as integral seals. Since the Kuiken reference clearly shows an O-ring seal which cannot meet the claim limitations, the depending claims can stand or fall with Kuiken.

2. Rejection of Claims 17-20

a. Both cited references lack of integral seal

Claim 17 also requires an integral seal between the conduit and the nozzle body. The Kuiken reference cannot meet this claim limitation as explained above.

b. There is no motivation to combine references.

Claim 17 requires combustible gases to pass through the primary passageway. While Ridenour addresses the use of gas, Kuiken is directed to the flow of water. The applicant would also respectfully submit that the concerns related to sealing water leaks in a water device and those related to sealing combustible gas often can take on different magnitudes of concern. Leaking water can create wetness. Leaking combustible gas in the presence of a flame can often be expected to create significant problems of a more immediate concern.

D. Obviousness Rejection of Claims 1, 3, 5-9, 11-14 and 16-20 based on Ridenour in view of Kachergis.

a. Rejection of claims 1-3, 5-9, 11-14 and 16-20.

Ridenour shows an adjustable gas nozzle which includes many features of the claimed invention. However, as acknowledged by the Office Action of October 25, 2007: "Ridenour differs from what is being claimed in the seal being distinct from the coupling." In fact, the claimed seal is not provided in Ridenour.

Kachergis shows a set of ribs **35** which retain an O-ring **37** which provides the seal. Unfortunately, the ribs **35** relied upon by the Office Action, do not provide any seal

with the nozzle body. Accordingly, this is another reference which fails to provide the limitation as claimed. The dependent claims 3, 5-9, 11-14 and 16 can stand or fall with claim 1.

2. Rejection of Claims 17-20.

a. Both references lack an integral seal.

Claim 17 is another independent claim. Claim 17 requires the integral seal to be distinct from the coupling which the Office Action observes is not present in Ridenour: "Ridenour differs from what is being claimed in the seal being distinct from the coupling."

Once again Kachergis is relied upon for the claimed seal by identifying the ribs **35** as the claimed seal. Unfortunately, the ribs **35** retain the O-ring **37** as can be seen clearly in Figure 4 and described in Column 2, lines 28-33. **Ribs** 35 are shown not being in sealing contact with the center bore of the sleeve **21**, while the loosely fitted flip ring **37** provides the sealing feature.

Accordingly at least this claimed limitation is not present in Kachergis or Ridenour. Claims 18-20 depend from claim 17 and can stand or fall with claim 17 for the purpose of this Appeal.

b. There is no motivation to combine references.

Claim 17 requires combustible gases to pass through the primary passageway. While Ridenour addresses the use of gas, Kachergis is directed to the flow of water.

The applicant would also respectfully submit that the concerns related to sealing water leaks in a water device and those related to sealing combustible gas often can take on different magnitudes of concern. Leaking water can create wetness. Leaking

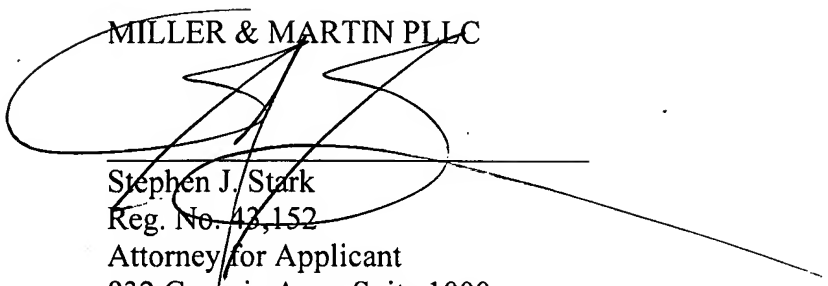
combustible gas in the presence of a flame can often be expected to create significant problems of a more immediate concern.

III. CONCLUSION

Claims 1-3, 5-9, 11-14 and 16-20 are not believed to be anticipated or obvious over the cited references for the rationale provided in this brief. Allowance of claims 1-3, 5-9, 11-14 and 16-20 is respectfully requested.

Respectfully submitted,

MILLER & MARTIN PLLC



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CERTIFICATE OF MAILING

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On this 8th day of July, 2009.

Beverly L. Middleton

Beverly L. Middleton

APPENDIX A

1. (Rejected) An adjustable gas nozzle comprising, in combination:

a nozzle body member having an elongated passageway therethrough with an inlet opening at a first end and an outlet at a second end;

a conduit connected to the nozzle body member;

an adjusting member disposed intermediate the conduit and the nozzle body member and having a first end with a first restricted orifice disposed proximate to the second end of the nozzle body member, and a second end having a second orifice, said first and second ends having a first passageway intermediate thereto providing fluid communication intermediate the first restricted orifice and the second orifice;

a coupling between said conduit and said nozzle body member to permit first and second alternative positions therebetween;

a by-pass passageway around the first passageway of the adjusting member and said first restricted orifice;

cooperative surfaces in said first position to seal between said body member and said adjusting member to close off flow through said by-pass passageway to permit a first gas flow through the first restricted orifice and second orifice in series so that gas flow rate is regulated by said first restricted orifice;

cooperating means associated with said adjusting member and said conduit upstream of said cooperating surfaces for limiting the displacement of said nozzle body member relative to said conduit in said first position;

said nozzle body member being moveable into said second position relative to said conduit to relieve the seal between the said body member and said adjusting member

to permit a second gas flow of an amount greater than said first gas flow through the combination of said first restricted orifice and said by-pass passageway wherein flow through the by-pass passageway does not flow through the first passageway and said cooperating surfaces are spaced apart in the second position;

a seal distinct of the coupling provided between said conduit and said nozzle body member and integral to the conduit precluding leakage of gas therebetween in both the first and second positions; and

wherein the first position is configured to provide sufficient gas flow for use with propane and the second position is configured to provide sufficient gas flow for natural gas usage for a selected downstream application in which significantly more natural gas would be required than propane for similar performance.

2. (Rejected) An adjustable gas nozzle as recited in claim 1, wherein said seal comprises ribs on said conduit.

3. (Rejected) An adjustable gas nozzle as recited in claim 1, wherein the material of one of said conduit and body member is harder than the other.

4. Canceled

5. (Rejected) An adjustable gas nozzle as recited in claim 3, wherein the seal is located intermediate the coupling and the outlet of the nozzle body member.

6. (Rejected) An adjustable gas nozzle as recited in claim 1, wherein said restricted orifices and said outlet are coaxial, and said first restricted orifice is smaller than the outlet of said nozzle body member.

7. (Rejected) An adjustable gas nozzle as recited in claim 1, wherein said cooperating means includes an annular shoulder about an anterior wall of said conduit; and

a plurality of legs elongated longitudinally along the adjusting member spaced longitudinally from the first restricted orifice of said adjusting member and positionable on said annular shoulder, the space between adjacent legs providing the by-pass passageway for gas flow therebetween when said cooperative surfaces are not engaged.

8. (Rejected) An adjustable gas nozzle as recited in claim 7, wherein said seal comprises ribs on the conduit.

9. (Rejected) An adjustable gas nozzle as recited in claim 7, wherein the material of one of said conduit and body member is harder than the other.

10. Canceled

11. (Rejected) An adjustable gas nozzle as recited in claim 9, wherein the seal is located intermediate the coupling and the outlet of the nozzle body member.

12. (Rejected) An adjustable gas nozzle as recited in claim 6, wherein said cooperating means includes an annular shoulder about an anterior wall of said conduit; and

a plurality of legs elongated longitudinally along the adjusting member spaced longitudinally from the outlet of said adjusting member and positionable on said shoulder, the space between adjacent legs providing a passageway for gas flow therebetween when said cooperative surfaces are not engaged.

13. (Rejected) An adjustable gas nozzle as recited in claim 12, wherein said seal comprises ribs on the conduit.

14. (Rejected) An adjustable gas nozzle as recited in claim 13, wherein the material of one of said conduit and body member is harder than the other.

15. Canceled

16. (Rejected) An adjustable gas nozzle as recited in claim 14, wherein the seal is located intermediate the coupling and the outlet of the nozzle body member.

17. (Rejected) An adjustable gas nozzle comprising, in combination:

a nozzle body member having an elongated passageway therethrough receiving combustible gases therethrough with an inlet opening at a first end and an outlet at a second end;

a conduit connected to the nozzle body member;

an adjustment member disposed intermediate the conduit and the nozzle body member and having a first non-adjustable restricted orifice at a terminal end of the adjustment member proximate to the second end of the nozzle body member;

a coupling between said conduit and said body member to permit first and second alternative positions therebetween;

a by-pass passageway around the adjusting member and said first restricted orifice;

cooperative surfaces in said first position to seal between said body member and said adjusting member to close off flow through said by-pass passageway to permit a first gas flow through the first restricted orifice so that gas flow rate is regulated by said first restricted orifice;

cooperating means associated with said adjusting member and said conduit upstream of said cooperating surfaces for limiting the displacement of said nozzle body member relative to said conduit in said first position;

said nozzle body member being moveable into said second position relative to said conduit to relieve the seal between the said body member and said adjusting member to permit a second gas flow of an amount greater than said first gas flow through the combination of said first restricted orifice and said by-pass passageway; and

an integral seal distinct from the coupling provided between said conduit and said nozzle body member to preclude leakage of gas therebetween in both the first and second positions.

18. (Rejected) An adjustable gas nozzle as recited in claim 17, wherein said seal comprises ribs on said conduit.

19. (Rejected) An adjustable gas nozzle as recited in claim 18, wherein the material of one of said conduit and body member is harder than the other.

20. (Rejected) An adjustable gas nozzle as recited in claim 19, wherein said conduit has an end and said seal is disposed intermediate the coupling and the end of the conduit.

APPENDIX B: EVIDENCE APPENDIX

None

APPENDIX C: RELATED PROCEEDINGS APPENDIX

None